

Review Ques
Word Problems
p. 294 q. 11& 13

Rev = (Price)(# of tickets sold)

#5 $R = (5 + 0.50x)(300 - 30x)$

300 $y = (5 + 0.50x)(300 - 30x)$

20¢ factored form

lose 20 $5 + 0.50x = 0$ $300 - 30x = 0$

$0.50x = -5$ $-30x = -300$

$\frac{0.50x}{0.5} = \frac{-5}{0.5}$ $\frac{-30x}{-30} = \frac{-300}{-30}$

$x = -10$ $x = 10$

$\frac{51V}{2}$ $x = 0$

$-\frac{10+10}{2}$ $y = (5 + 0.50x)(300 - 30x)$

$= 0$ $y = (5 + 0.5(0))(300 - 30(0))$

$y = (5)(300)$

$y = 1500$ $(0, 1500)$

If they increase the price they will make a max revenue of \$1500.

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$y = 0.06x^2 - 0.27x + 5.36$

Standard Form

Minimum vertex x vertex

i) $\frac{-b}{2a}$

ii) partial factoring

$b = -0.27$ $a = 0.06$

$\frac{-b}{2a}$

$\frac{-(-0.27)}{2(0.06)}$

$\frac{0.27}{0.12}$

$= 2.25$

x_{vertex}

$y = 0.06x^2 - 0.27x + 5.36$

$y = 0.06(2.25)^2 - 0.27(2.25) + 5.36$

$y = 0.06(5.0625) - 0.6075 + 5.36$

$y = 0.30375 - 0.6075 + 5.36$

$y = 5.05625$

$(2.25, 5.06)$

inflection since 1955

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Homework
p.301 and 302

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